WHAT IS CLAIMED IS:

1. A signal acquisition process comprising:

a) performing an acquisition dwell on a plurality of cells within a time/frequency uncertainty range to detect a set of cells having the largest correlation peaks;

b) performing an initial verification dwell on the set of cells detected in step a by comparing the peak of each cell to a threshold and retaining those cells having a peak at least as great as the threshold;

c) performing an acquisition dwell on another plurality of cells within the time/frequency uncertainty range to detect another set of cells having the largest correlation peaks; and

d) performing a subsequent verification dwell on the cells retained in step b and an initial verification dwell on the set of cells detected in step c by comparing the peak of each cell to the threshold and retaining those cells having a peak at least as great as the threshold.

2. The process of claim 1 wherein acquisition dwells and verification dwells are performed in parallel.

3. The process of claim 1 wherein acquisition dwells and verification dwells are performed serially.

4. The process of claim 1 wherein the set of cells from step a comprises the 6 cells having the largest correlation peaks.

5. The process of claim 4 wherein the set of cells from step c comprises 6-N cells having the largest correlation peak, where N is the number of cells retained in step b.

6. The process of claim 5 wherein the threshold is set such that N is no greater than 1.

7.   A signal acquisition device comprising:

a plurality of acquisition correlators adapted to perform an initial acquisition dwell and a series of subsequent acquisition dwells on a plurality of cells within a time/frequency uncertainty range, each acquisition dwell to detect a set of cells having the largest correlation peaks; and

a plurality of independent correlators, each adapted to:

receive a detected cell from the acquisition correlators;

perform an initial verification dwell on the detected cell by comparing the peak of the detected cell to a threshold and retaining the detected cell only if it has a peak at least as great as the threshold; and

perform at least one subsequent verification dwell on the retained cell.

8.   The signal acquisition device of claim 7 wherein the acquisition correlators and the independent correlators are adapted to perform acquisition dwells and verification dwells in parallel.

9.   The signal acquisition device of claim 7 wherein the acquisition correlators and the independent correlators are adapted to perform acquisition dwells and verification dwells serially.

10.   The signal acquisition device of claim 7 wherein the set of cells detected during the initial acquisition dwell comprises the 6 cells having the largest correlation peaks.

11.   The signal acquisition device of claim 10 wherein the set of cells detected during subsequent acquisition dwells comprises 6-N cells having the largest correlation peak, where N is the number of cells retained by the independent correlators.

12.   The signal acquisition device of claim 11 wherein the threshold is set such that N is no greater than 1.

13.   A system for tracking the location of an object using signals transmitted by GPS satellites, said system comprising:

an antenna associated with the object for receiving GPS signals; and

a signal acquisition device in operative communication with the antenna, the device including:

a plurality of acquisition correlators adapted to perform an initial acquisition dwell and a series of subsequent acquisition dwells on a plurality of cells within a time/frequency uncertainty range, each acquisition dwell to detect a set of cells having the largest correlation peaks; and

a plurality of independent correlators, each adapted to:

receive a detected cell from the acquisition correlators;

perform an initial verification dwell on the detected cell by comparing the peak of the detected cell to a threshold and retaining the detected cell only if it has a peak at least as great as the threshold; and

perform at least one subsequent verification dwell on the retained cell.

14.   A signal acquisition process comprising:

a) performing a plurality of acquisition dwells on a plurality of cells within a time/frequency uncertainty range, each acquisition dwell to detect "x" number of cells having the largest correlation peaks;

b) comparing the cells detected during the acquisition dwells and retaining "x" number of cells having the largest correlation peaks; and

c) performing a verification dwell on the "x" number of cells by comparing the peak of each cell to a threshold and retaining only those cells having a peak that exceeds the threshold.

15.   The process of claim 14 further comprising:

after step c, performing at least one additional acquisition dwell on another plurality of cells within the time/frequency uncertainty range to detect "x" number of cells having the largest correlation peaks;

5   comparing the cells detected during the additional acquisition dwell with the cells retained in step c and retaining "x" number of cells having the largest correlation peaks; and repeating step c.

16.   The process of claim 14 wherein "x" equals 12.

17.   The process of claim 14 wherein the threshold is such that only one cell is retained.

18.   A signal acquisition device comprising:

a plurality of acquisition correlators adapted to perform acquisition dwells on a plurality of cells within a time/frequency uncertainty range to detect "x" number of cells having the largest correlation peaks;

5   a processor adapted to compare the cells detected during the acquisition dwells and retain "x" number of cells having the largest correlation peaks; and

a plurality of independent correlators, each adapted to:

receive a detected cell from the processor;

perform an initial verification dwell on the detected cell by comparing the peak

10   of the detected cell to a threshold and retaining the detected cell only

if it has a peak at least as great as the threshold; and

perform a subsequent verification dwell on the retained cell.

19.   The signal acquisition device of claim 18 wherein to perform a subsequent verification on the retained cell the independent correlators are adapted to return the retained cell to the processor for further comparison with other cells detected during additional acquisition dwells.

20.   The signal acquisition device of claim 18 wherein the acquisition correlators are adapted to be reconfigured to function as the independent correlators.

21.   The signal acquisition device of claim 18 wherein "x" equals 12.

22.   The signal acquisition device of claim 18 wherein the threshold is such that only one cell is retained.

23.   A system for tracking the location of an object using signals transmitted by GPS satellites, said system comprising:

an antenna associated with the object for receiving GPS signals; and

a signal acquisition device in operative communication with the antenna, the device

5   including:

a plurality of acquisition correlators adapted to perform acquisition dwells on

a plurality of cells within a time/frequency uncertainty range to detect

"x" number of cells having the largest correlation peaks;

a processor adapted to compare the cells detected during the acquisition dwells

10   and retain "x" number of cells having the largest correlation peaks; and

a plurality of independent correlators, each adapted to:

receive a detected cell from the processor;

perform an initial verification dwell on the detected cell by comparing

the peak of the detected cell to a threshold and retaining the

15   detected cell only if it has a peak at least as great as the

threshold; and

perform a subsequent verification on the retained cell.